

**Notice of Allowability**

Application No.

09/692,554

Applicant(s)

LEBLANC ET AL.

Examiner

Brian D. Nguyen

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/6/06.
2. ☒ The allowed claim(s) is/are 1,3-15,17-20,78-80,21,23,31,33-38,82-84,39,41-44,85-86,46,48,50-54,56-59,87-88,60,62,64,66-70,81,27-30 (renumbered 1-66, respectively).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- \* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date 01252006.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**BRIAN NGUYEN**  
**PRIMARY EXAMINER**

1/25/06

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Raymond R. Tabandeh on 1/25/06.

3. The claims have been amended as follows:

27. (Currently Presented) The system of claim 81 wherein the ~~separated component~~ voice frame comprise first and second portions, the tone detection system further comprising a state machine to invoke the detector to detect the tone in the second portion of the ~~separated component~~ voice frame.

29. (Currently Presented) The system of claim 81 wherein the ~~separated component~~ voice frame comprise first and second frames, the first frame preceding the second frame in time, each of the first and second frames having first and second portions, the tone detection system further comprising a state machine to invoke the detector to detect the tone in the second portion of the first frame, and to invoke the detector to process the tone in the first portion of the second frame only if the detector detects the tone in the second portion of the first frame.

39. (Currently Amended) A system of detecting a dual tone in a voice packet having a plurality of voice frames comprising:

a buffer for receiving the voice packet over a network;

a first bandpass filter to separate ~~the~~ a first component from the voice packet;

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a second bandpass filter to separate ~~the~~ a second component from the voice packet;  
a first detector to determine a frequency of the separated first component;  
a second detector to determine a frequency of the separated second component;  
a first comparator to compare the frequency of the first component to at least one of a plurality of frequency ranges to determine whether the separated first component comprises one of the dual tone; and

a second comparator to compare the frequency of the separated second component to at least one of the frequency ranges to determine whether the second component comprises the other one of the dual tone, wherein the determination of the dual tone ~~tones~~ is delayed until the last frame of the voice packet is processed.

85. (Currently Amended) The dual tone detection system of claim 39 further comprising a first power estimator to estimate power of the separated first component, the first comparator further comparing the estimated power of the separated first component to a power threshold, the determination of whether the separated first component comprises said one of the dual tone ~~tones~~ being further a function of the comparison.

86. (Currently Amended) The dual tone detection system of claim 39 further comprising first and second power estimators each estimating power of a respective one of the first and second separated components, and a twist estimator to compare a ratio of the estimated power for the first and second components, ~~the~~ determination of whether the voice packet comprises the dual tone being further a function of the comparison.

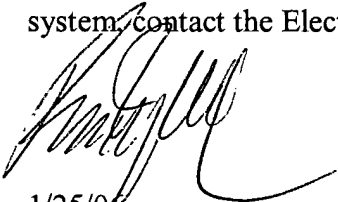
### ***Conclusion***

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian D. Nguyen whose telephone number is (571) 272-3084. The examiner can normally be reached on 7:30-6:00 Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



1/25/06

**BRIAN NGUYEN**  
**PRIMARY EXAMINER**